

IN THE CLAIMS

1. (Currently Amended) A colloidal cupric compound of formula (I):



wherein A and B are anions,

$$0 \leq x \leq 2,$$

$$0 < y \leq 2,$$

$$mx + ny = 2;$$

wherein m and n are coefficients equal to oxidation numbers of the anion A and B, respectively,

wherein the anion A is selected from the group consisting of Cl^- , Br^- , I^- , F^- , NO_3^- , SO_4^{2-} , PO_4^{3-} , OH^- , RCOO^- , tartrate²⁻, citrate³⁻ and an amino acid residue;

wherein R is selected from the group consisting of hydrogen, a C_1 - C_{20} straight chain hydrocarbon, a C_1 - C_{20} branched hydrocarbon and an aromatic group,

wherein the colloidal cupric compound is made by a process comprising the steps of:

_____ purifying a Cu^{2+} solution by adding an oxidizing agent and H_3PO_4 to the solution; and purifying the solution, and

_____ raising the pH of the solution, and

_____ wherein the colloidal cupric compound does not fall out of the solution.

2. (Original) The colloidal cupric compound of claim 1, wherein the Cu^{2+} solution is prepared from $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$.

3. (Previously Amended) The colloidal cupric compound of claim 1, wherein said purifying step further includes the steps of:

adjusting the pH to 3;
heating the solution; and
removing the solids.

4. (Previously Amended) The colloidal cupric compound of claim 1, wherein the oxidizing agent is selected from the group consisting of H_2O_2 and bleach.

5. (Original) The colloidal cupric compound of claim 3, wherein adjusting the pH to 3 is performed by adding Na_2CO_3 solution.

6. (Previously Amended) The colloidal cupric compound of claim 1, wherein the process further comprises:

adding an organic solvent to the solution to form a precipitate; and
collecting the precipitate.

7. (Previously Amended) The colloidal cupric compound of claim 6, wherein the organic solvent is selected from the group consisting of methanol and acetone.

8. (Original) The colloidal cupric compound of claim 6, wherein the precipitate is dried by nitrogen flow.

9. (Currently Amended) A process for producing a colloidal cupric compound of formula (I):



wherein A and B are anions,

$$0 \leq x \leq 2,$$

$$0 < y \leq 2, \text{ and}$$

$$mx + ny = 2;$$

wherein m and n are coefficients equal to oxidation numbers of the anion A and B, respectively,

wherein the anion A is selected from the group consisting of Cl^- , Br^- , I^- , F^- , NO_3^- , SO_4^{2-} , PO_4^{3-} , OH^- , RCOO^- , tartrate²⁻, citrate³⁻ and an amino acid residue;

wherein R is selected from the group consisting of hydrogen, a C_1 - C_{20} straight chain hydrocarbon, a C_1 - C_{20} branched hydrocarbon and an aromatic group;

the process comprising:

_____ purifying a Cu^{2+} solution by adding an oxidizing agent and H_3PO_4 to the solution; and purifying the solution, and

_____ raising the pH of the solution.

10. (Currently Amended) The process of claim 9, wherein the Cu^{2+} solution is prepared from $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$.

11. (Previously Amended) The process of claim 9, wherein said purifying step further includes the steps of:

adjusting the pH to 3;
heating the solution; and
removing the solids.

12. (Previously Amended) The process of claim 9, wherein the oxidizing agent is selected from the group consisting of H_2O_2 and bleach.

13. (Original) The process of claim 11, wherein adjusting the pH to 3 is performed by adding Na_2CO_3 solution.

14. (Currently Amended) The process of claim 9, wherein the process further comprises:

adding an organic solvent to the solution to form a precipitate; and
collecting the precipitate.

15. (Previously Amended) The process of claim 14, wherein the organic solvent is selected from the group consisting of methanol and acetone.

16. (Original) The process of claim 14, further comprising drying the precipitate by nitrogen flow.

17. (Original) A method of controlling fungal diseases in plants comprising the step of applying to said plants a fungicide comprising the colloidal cupric compound of claim 1.

18. (Canceled)

19. (Original) The method of claim 17, wherein the fungicide is colloidal copper citrate.

20. (Canceled)

21. (Original) The method of claim 17, wherein the fungicide is colloidal copper citrate solution containing about 50 mg/L copper.

22. (Canceled)

23. (Previously Added) A method of controlling fungal diseases in plants comprising the step of applying to said plants a fungicide made according to the process of claim 9.

24. (Previously Added) The method of claim 23, wherein the fungicide is colloidal copper citrate.

25. (Previously Added) The method of claim 23, wherein the fungicide is colloidal copper citrate solution containing about 50 mg/L copper.